Intel® Omni-Path Fabric Manager GUI Software

Release Notes for v10.9.3

Rev. 1.0

June 2019

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1.0 Overview of the Release

This document provides a brief overview of the changes introduced into the Intel® Omni-Path Fabric Manager GUI software by this release. References to more detailed information are provided where necessary. The information contained in this document is intended as supplemental information only; it should be used in conjunction with the documentation provided for each component.

These Release Notes list the features supported in this software release, open issues, and issues that were resolved during release development.

1.1 Audience

The information provided in this document is intended for installers, software support engineers, service personnel, and system administrators.

1.2 Software License Agreement

This software is provided under license agreements and may contain third-party software under separate third-party licensing. Please refer to the license files provided with the software for specific details.

1.3 If You Need Help

Technical support for Intel® Omni-Path products is available 24 hours a day, 365 days a year. Please contact Intel Customer Support or visit http://www.intel.com/omnipath/ support for additional detail.

1.4 Supported in this Release

This section lists the items supported for this release.

- Fabric Manager GUI works with a fabric of up to 10,000 end nodes.

- Supports multi-tenancy environments. You can view and update QOSGroups parameters in the QOSGroups Management window, and specify the QOSGroup for a Virtual Fabric in the Virtual Fabrics Management window.

- Data is collected from the Fabric Manager's Fabric Executive and local data storage and is shown in the GUI as Failures, Hot spots, or trends.

- Information for the Fabric Manager's Device Groups, Virtual Fabric configuration, and Command Line Interface descriptions can be shown.

- Fabric Manager GUI Online help opens in a separate window. Context-sensitive help is also available.

- The Home page provides the big picture of a fabric, including the Subnet Summary, Subnet Performance, Subnet Statistics, Statistical Summary of Nodes, Statistical Summary of Ports, Subnet Status, Subnet Health Trend, and Worst Nodes.

- The Topology page provides topology information for selected resources, with a selection of Device Set Topology, Device Node topology, Link Topology, and Route Topology.

- The Administration Page allows the user to manage a subnet with Applications Management, Device Groups Management, QOSGroups Management, Virtual Fabrics Management, an Interactive Console, and a Log Viewer.

- Other useful items include an Event Table, a Pin Board, and a Navigation bar.

- New Health Score calculation

- Email notification on events

- Application, Device Group, and Virtual Fabric management on ESM

1.5 Operating Systems

This release of the Intel® Omni-Path Fabric Manager GUI supports the operating systems listed in the following table. Note that JRE 1.8 is required.

Table 1. Supported Operating Systems

Operating System	Update/SP	Kernel Version
Red Hat* Enterprise Linux* (RHEL*) 7.5 X86_64	Update 5	3.10.0-862.el7.x86_64
Red Hat* Enterprise Linux* (RHEL*) 7.6 X86_64	Update 6	3.10.0-957.el7.x86_64
Red Hat* Enterprise Linux* (RHEL*) 8 X86_64		4.18.0-80.el8.x86_64
CentOS*-7 (1804) X86_64 (corresponds to RHEL* 7.5)	(1804)	3.10.0-862.el7.x86_64
CentOS*-7 (1810) X86_64 (corresponds to RHEL* 7.6)	(1810)	3.10.0-957.el7.x86_64
Scientific Linux* 7.5 X86_64	Update 5	3.10.0-862.el7.x86_64
Scientific Linux* 7.6 X86_64	Update 6	3.10.0-957.el7.x86_64
SUSE* Linux* Enterprise Server (SLES*) 12.3 X86_64	Service Pack 3	4.4.114-94.14_default
SUSE* Linux* Enterprise Server (SLES*) 12.4 X86_64	Service Pack 4	4.12.14-94.41_default
SUSE* Linux* Enterprise Server (SLES*) 15 X86_64		4.12.14-23_default
SUSE* Linux* Enterprise Server (SLES*) 15.1 X86_64	Service Pack 1	4.12.14-195_default
Microsoft Windows* 10.0 (64-bit)		
Microsoft Windows* 8.1 (64-bit)		

1.6 Installation Requirements

The following are special or release-specific installation requirements for this release:

- Oracle* Java* Runtime Environment (JRE) 1.8

1.7 Product Constraints

The following is a list of product constraints for this release:

- None

1.8 Product Limitations

The following is a list of product limitations:

- The Applications, DeviceGroups and VirtualFabrics management on the Admin Page only apply on the common section on file `opafm.xml`. To change FM per instance configurations, you must manually edit the file.

- This release does not support proxy setup. To use FM GUI with proxy, you must run FM GUI locally with fabric, and then use remote desktop or a similar technique such as VNC, NX, or XMing to access FM GUI remotely via proxy.

- Customers using version 10.8.x of the Fabric Manager (FM) may experience slow data updates in the FM GUI for a large fabric (over 5K nodes). This slow response can be up to 20-30 seconds, and it may trigger an FM GUI failover while it attempts to find another available subnet manager (SM) node. The root cause of this issue is a slow Focus Ports query on the FM side. This issue is fixed in version 10.9 (and later) of the FM. Intel recommends upgrading to version 10.9 or later of the FM.

1.9 Release Compatibility

This FM GUI version is compatible with IFS releases 10.9.x and 10.8.x.

1.10 Document Versions

The following table lists the end user document versions supported by this release.

Table 2. Supported Document Versions

Title	Doc. Number	Revision
Intel® Omni-Path Fabric Quick Start Guide	J57479	6.0
Intel® Omni-Path Fabric Setup Guide	J27600	10.0
Intel® Omni-Path Fabric Switches Hardware Installation Guide	H76456	10.0
Intel® Omni-Path Host Fabric Interface Installation Guide	H76466	5.0
Intel® Omni-Path Fabric Software Installation Guide	H76467	14.0
Intel® Omni-Path Fabric Switches GUI User Guide	H76457	10.0
Intel® Omni-Path Fabric Switches Command Line Interface Reference Guide	H76458	10.0
Intel® Omni-Path Fabric Suite FastFabric User Guide	H76469	14.0
Intel® Omni-Path Fabric Suite Fabric Manager User Guide	H76468	13.0
Intel® Omni-Path Fabric Suite Fabric Manager GUI User Guide	H76471	13.0
Intel® Omni-Path Fabric Host Software User Guide	H76470	14.0
Intel® Performance Scaled Messaging 2 (PSM2) Programmer's Guide	H76473	12.0
Intel® Omni-Path Fabric Performance Tuning User Guide	H93143	16.0
Intel® Omni-Path IP and LNet Router Design Guide (Old title: Intel® Omni-Path IP and Storage Router Design Guide)	H99668	8.0
Building Containers for Intel® Omni-Path Fabrics using Docker* and Singularity* Application Note	J57474	7.0
		continued...

Title	Doc. Number	Revision
Intel® Omni-Path Management API Programmer's Guide	J68876	6.0
Configuring Non-Volatile Memory Express* (NVMe*) over Fabrics on Intel® Omni-Path Architecture Application Note	J78967	1.0
Intel® Omni-Path Fabric Software Release Notes	K59645	1.0
Intel® Omni-Path Fabric Manager GUI Release Notes	K61052	1.0
Intel® Omni-Path Fabric Switches Release Notes (includes managed and externally-managed switches)	K38337	1.0
Intel® Omni-Path Fabric Unified Extensible Firmware Interface (UEFI) Release Notes	K50782	1.0
Intel® Omni-Path Fabric Thermal Management Microchip (TMM) Release Notes	K38341	1.0
Intel® Omni-Path Fabric Firmware Tools Release Notes	K38342	1.0

Related Links

Intel Omni-Path Documentation Library

2.0 Issues

This section lists the resolved and open issues in the Intel® Omni-Path Fabric Manager GUI.

2.1 Resolved Issues

The following table lists issues that are resolved.

Table 3. Resolved Issues

ID	Description	Resolved in Release
STL-57432	Customers who are upgrading the FM GUI from version 10.7 (or older) to version 10.8 (or newer) may experience issues defining subnets within the application. In the user interface, they may see that the database update step failed during the FM GUI Configuration Setup along with the error message **ERROR - user lacks privilege or object not found: TABLE_GEN** in the application log. This error is the result of an upgrade error of the internal cache database.	10.9.3
STL-57789	Customers using version 10.8 (and earlier) of the Fabric Manager (FM) may experience slow data updates in the FM GUI for a large fabric (i.e., >5K nodes). This slow response can be up to 20-30 seconds, and it may even trigger an FM GUI failover while it attempts to find another available subnet manager (SM) node. The root cause of this issue is the slow Focus Ports query on the FM side. This issue is fixed in version 10.9 (and later) of the FM.	10.9.3

2.2 Open Issues

The following table lists the open issues for this release.

Table 4. Open Issues

ID	Description	Workaround
None		

3.0   Related Information

3.1   Intel® Omni-Path Documentation Library

Intel® Omni-Path publications are available at the following URLs:

- Intel® Omni-Path Switches Installation, User, and Reference Guides

    http://www.intel.com/omnipath/SwitchPublications

- Intel® Omni-Path Software Installation, User, and Reference Guides (includes HFI documents)

    http://www.intel.com/omnipath/FabricSoftwarePublications

- Drivers and Software (including Release Notes)

    http://www.intel.com/omnipath/Downloads

Use the tasks listed in this table to find the corresponding Intel® Omni-Path document.

Task	Document Title	Description
Key: Shading indicates the URL to use for accessing the particular document.		
• Intel® Omni-Path Switches Installation, User, and Reference Guides: http://www.intel.com/omnipath/SwitchPublications		
• Intel® Omni-Path Software Installation, User, and Reference Guides (includes HFI documents): http://www.intel.com/omnipath/FabricSoftwarePublications (no shading)		
• Drivers, Software, and Firmware (including Release Notes): http://www.intel.com/omnipath/Downloads		
Using the Intel® OPA documentation set	*Intel® Omni-Path Fabric Quick Start Guide*	A roadmap to Intel's comprehensive library of publications describing all aspects of the product family. This document outlines the most basic steps for getting your Intel® Omni-Path Architecture (Intel® OPA) cluster installed and operational.
Setting up an Intel® OPA cluster	*Intel® Omni-Path Fabric Setup Guide*	Provides a high level overview of the steps required to stage a customer-based installation of the Intel® Omni-Path Fabric. Procedures and key reference documents, such as Intel® Omni-Path user guides and installation guides, are provided to clarify the process. Additional commands and best known methods are defined to facilitate the installation process and troubleshooting.
Installing hardware	*Intel® Omni-Path Fabric Switches Hardware Installation Guide*	Describes the hardware installation and initial configuration tasks for the Intel® Omni-Path Switches 100 Series. This includes: Intel® Omni-Path Edge Switches 100 Series, 24 and 48-port configurable Edge switches, and Intel® Omni-Path Director Class Switches 100 Series.
	Intel® Omni-Path Host Fabric Interface Installation Guide	Contains instructions for installing the HFI in an Intel® OPA cluster.
		continued...

Task	Document Title	Description
Installing host software Installing HFI firmware Installing switch firmware (externally-managed switches)	*Intel® Omni-Path Fabric Software Installation Guide*	Describes using a Text-based User Interface (TUI) to guide you through the installation process. You have the option of using command line interface (CLI) commands to perform the installation or install using the Linux* distribution software.
Managing a switch using Chassis Viewer GUI Installing switch firmware (managed switches)	*Intel® Omni-Path Fabric Switches GUI User Guide*	Describes the graphical user interface (GUI) of the Intel® Omni-Path Fabric Chassis Viewer GUI. This document provides task-oriented procedures for configuring and managing the Intel® Omni-Path Switch family. Help: GUI embedded help files
Managing a switch using the CLI Installing switch firmware (managed switches)	*Intel® Omni-Path Fabric Switches Command Line Interface Reference Guide*	Describes the command line interface (CLI) task information for the Intel® Omni-Path Switch family. Help: -help for each CLI
Managing a fabric using FastFabric	*Intel® Omni-Path Fabric Suite FastFabric User Guide*	Provides instructions for using the set of fabric management tools designed to simplify and optimize common fabric management tasks. The management tools consist of Text-based User Interface (TUI) menus and command line interface (CLI) commands. Help: -help and man pages for each CLI. Also, all host CLI commands can be accessed as console help in the Fabric Manager GUI.
Managing a fabric using Fabric Manager	*Intel® Omni-Path Fabric Suite Fabric Manager User Guide*	The Fabric Manager uses a well defined management protocol to communicate with management agents in every Intel® Omni-Path Host Fabric Interface (HFI) and switch. Through these interfaces the Fabric Manager is able to discover, configure, and monitor the fabric.
	Intel® Omni-Path Fabric Suite Fabric Manager GUI User Guide	Provides an intuitive, scalable dashboard and set of analysis tools for graphically monitoring fabric status and configuration. This document is a user-friendly alternative to traditional command-line tools for day-to-day monitoring of fabric health. Help: Fabric Manager GUI embedded help files
Configuring and administering Intel® HFI and IPoIB driver Running MPI applications on Intel® OPA	*Intel® Omni-Path Fabric Host Software User Guide*	Describes how to set up and administer the Host Fabric Interface (HFI) after the software has been installed. The audience for this document includes cluster administrators and Message-Passing Interface (MPI) application programmers.
Writing and running middleware that uses Intel® OPA	*Intel® Performance Scaled Messaging 2 (PSM2) Programmer's Guide*	Provides a reference for programmers working with the Intel® PSM2 Application Programming Interface (API). The Performance Scaled Messaging 2 API (PSM2 API) is a low-level user-level communications interface.
Optimizing system performance	*Intel® Omni-Path Fabric Performance Tuning User Guide*	Describes BIOS settings and parameters that have been shown to ensure best performance, or make performance more consistent, on Intel® Omni-Path Architecture. If you are interested in benchmarking the performance of your system, these tips may help you obtain better performance.
Designing an IP or LNet router on Intel® OPA	*Intel® Omni-Path IP and LNet Router Design Guide* (Old title: *Intel® Omni-Path IP and Storage Router Design Guide*)	Describes how to install, configure, and administer an IPoIB router solution (Linux* IP or LNet) for inter-operating between Intel® Omni-Path and a legacy InfiniBand* fabric.

Task	Document Title	Description
Building Containers for Intel® OPA fabrics	*Building Containers for Intel® Omni-Path Fabrics using Docker* and Singularity* Application Note*	Provides basic information for building and running Docker* and Singularity* containers on Linux*-based computer platforms that incorporate Intel® Omni-Path networking technology.
Writing management applications that interface with Intel® OPA	*Intel® Omni-Path Management API Programmer's Guide*	Contains a reference for programmers working with the Intel® Omni-Path Architecture Management (Intel OPAMGT) Application Programming Interface (API). The Intel OPAMGT API is a C-API permitting in-band and out-of-band queries of the FM's Subnet Administrator and Performance Administrator.
Using NVMe* over Fabrics on Intel® OPA	*Configuring Non-Volatile Memory Express* (NVMe*) over Fabrics on Intel® Omni-Path Architecture Application Note*	Describes how to implement a simple Intel® Omni-Path Architecture-based point-to-point configuration with one target and one host server.
Learning about new release features, open issues, and resolved issues for a particular release	*Intel® Omni-Path Fabric Software Release Notes*	
	Intel® Omni-Path Fabric Manager GUI Release Notes	
	Intel® Omni-Path Fabric Switches Release Notes (includes managed and externally-managed switches)	
	Intel® Omni-Path Fabric Unified Extensible Firmware Interface (UEFI) Release Notes	
	Intel® Omni-Path Fabric Thermal Management Microchip (TMM) Release Notes	
	Intel® Omni-Path Fabric Firmware Tools Release Notes	

3.1.1   How to Search the Intel® Omni-Path Documentation Set

Many PDF readers, such as Adobe* Reader and Foxit* Reader, allow you to search across multiple PDFs in a folder.

Follow these steps:

1. Download and unzip all the Intel® Omni-Path PDFs into a single folder.

2. Open your PDF reader and use **CTRL-SHIFT-F** to open the Advanced Search window.

3. Select **All PDF documents in...**

4. Select **Browse for Location** in the dropdown menu and navigate to the folder containing the PDFs.

5. Enter the string you are looking for and click **Search**.

Use advanced features to further refine your search criteria. Refer to your PDF reader Help for details.